

REMARKS

**Allowed Claims**

Applicant notes with appreciation that claims 1-8, 10, and 12-29 are allowed. As such, these claims are not discussed further herein.

**§112 Rejections**

The Examiner rejects claims 9 and 11 under §112 stating that "it is unclear what is meant by 'a synchronous differential transmission.' " These claims have been amended to now read in relevant part "via differential signaling on said second set of conductors of said first cable using said synchronous transmit method." Such amendments resolve the §112 issue without narrowing the scope of the respective claims in any way. Support for the amendments can be found at page 6, lines 10-22, and particularly lines 20-22. If the Examiner maintains the §112 rejections, the Examiner is requested to propose alternative claim language that the Examiner feels would resolve the issue.

**§103 Rejections**

The Examiner rejects claims 30-33 under §103 over Nyberg in view of Oliver, and sometimes additionally in view of Kirmse. Applicant requests reconsideration in view of the following.

Applicant agrees that Nyberg discloses distributing the AFS signal from central unit to a plurality of radio transceiver stations. However, Applicant respectfully disagrees that Nyberg shows running a separate cable to each radio transceiver from the central unit. Nyberg specifically describes the prior art as using a local bus cable

network, see page 1, lines 24-26. One of ordinary skill in the art would understand this to mean a single cable that loops between the central unit and the various radio transceivers. This understanding is confirmed by the statement in Nyberg that "the propagation delays along the cable mean that true synchronisation can be lost," page 1, line 33-34. Applicant recognizes that Figure 1 shows a separate "link" between the central unit and each respective radio transceiver, but Applicant respectfully submits that the "links" shown are logical links, not physical links. Thus, Applicant submits that Nyberg does not show first and second cables as claimed.

Further, even assuming *arguendo* that Nyberg, through Figure 1, suggests running a separate cable from the central unit to each respective radio transceiver, there is no indication in Nyberg about the number of conductors in such cables. With respect to specific claim language, the Examiner states that Nyberg shows both "transferring data between the central unit and a first radio head via a first set of conductors of a first cable," and "sending timing data from said central unit to said first radio head via a second set of conductors of said first cable." However, in order for this to be true, Nyberg must disclose that the relevant cable (the "first cable") have at least two sets of conductors.<sup>1</sup> Nyberg makes no such disclosure; instead, Nyberg never appears to mention or suggest how many conductors are in any cable. If the Examiner contends otherwise, the Examiner is requested to point to a specific passage in Nyberg supporting such a proposition. Indeed, the entire thrust of Nyberg is that the relevant timing signals are specifically time division multiplexed with the other data, and

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<sup>1</sup> This argument mentions only the first cable for the sake of clarity, but it should be understood that the same logic applies to the requirements with respect to the second cable of "transferring data between the central unit and a second radio head via a first set of conductors of a second cable" and "sending timing data from said central unit to said second radio head via a second set of conductors of said second cable."

therefore sent on the same conductors as the other data -- not some separate set of conductors. Absent a showing of the relevant teachings in Nyberg,<sup>2</sup> Applicant submits that the present §103 rejection is improper.

Also, the present §103 rejection necessarily rests on the modification of Nyberg according to Oliver. Assuming *arguendo* that Oliver teaches that "various time slots [] of a TDM signal [may be] transported over separate conductors" (as suggested by the Examiner), Applicant respectfully submits that modifying Nyberg in such a fashion would defeat a fundamental purpose of Nyberg. One objective of Nyberg is to "provide a method of distributing air frame synchronisation between widely spaced radio transceivers, without requiring additional infrastructure," page 2, lines 3-6. The modification of Nyberg postulated by the Examiner would require a 24-fold increase in the number of conductors in the infrastructure, as there are 24 time slots. Such an increase in the number of conductors surely cannot be achieved without significant additional infrastructure -- which is directly contrary to the objective of Nyberg. As such, Applicant respectfully submits that Nyberg teaches away from the combination proposed by the Examiner, rendering the resultant §103 rejection improper.

Further, Applicant submits that the combination proposed by the Examiner eviscerates the reasoning of Nyberg and is not enabled. Nyberg's method is in recognition of the problem of propagation delay for timing signals from a central unit to radio transceivers that are separated by significant distance, see page 1, lines 29-34. Nyberg recognized that in such situations "true synchronisation can be lost," and that the prior art recognized that this made "a separate cable is necessary for the air frame

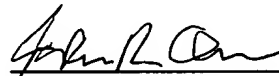
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<sup>2</sup> Applicant notes that the Examiner relies solely on Nyberg to show these teachings, and does not assert that either Oliver or Kirmse make any relevant teachings on this point. As such, Applicant's argument against Nyberg should be construed as arguing against the relevant combinations.

synchronisation signal, " page 1, line 34 to page 2, line 1. To counteract this, Nyberg multiplexes the relevant timing signals on the existing conductors. It is an essential element of Nyberg that the data signals and the timing information travel on the same conductors because the critical timing event is triggered by data in on other TDM channels (e.g., bytes "B" and "C" in frames 316 and 317). The entire circuitry and logic taught by Nyberg is premised on this common transmission path of the data and timing information. If the other data and the timing information are not sent on the same physical conductors, then it is not clear how the remote radio transceivers are to determine inter-channel propagation delays, thereby jeopardizing the critical timing event in Nyberg's approach. Neither Nyberg nor Oliver suggest an answer to this issue. Accordingly, Applicant respectfully submits that the proposed modification of Nyberg according to Oliver is improper, rendering the corresponding §103 rejections improper. As such, Applicant submits that claims 30-33 define patentable subject matter over the cited art.

In view of the above, Applicant respectfully submits that all currently pending claims are now in condition for allowance. However, if any issues remain, the Examiner is encouraged to telephone the undersigned so that they may be expeditiously resolved.

Respectfully submitted,  
COATS & BENNETT, P.L.L.C.



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